

WHAT IS CLAIMED IS:

1 1. A method for controlling a transmission capacity for
2 allocating efficiently the transmission capacity on a wired line
3 in every call in a data communication wherein said data
4 communication relates to a mobile communication system in which
5 data is transmitted in a wireless line and said wired line in
6 accordance with a packet system, comprising the steps of:

7 measuring an practical transmission speed of said data on
8 said wireless line in said every call;

9 determining said transmission capacity that is required for
10 transmitting said data at said transmission speed through said
11 wired line at the minimum level in said every call as a target
12 transmission capacity;

13 decreasing a permissible transmission capacity in the case
14 where said permissible transmission capacity that is usable for
15 transmission of said data through said wired line and determined
16 in said every call is larger than said target transmission
17 capacity; and

18 increasing the permissible transmission capacity in the
19 case where said permissible transmission capacity is smaller
20 than said target transmission capacity;

21 whereby a transmission speed of said data in said wired line
22 being controlled so as to be equal to or less than said permissible
23 transmission capacity.

1 2. A method for controlling a transmission capacity
2 for allocating efficiently the transmission capacity on a wired

line in every call in a data communication wherein said data communication relates to a mobile communication system in which data is transmitted in a wireless line and said wired line in accordance with a packet system, comprising the steps of:

measuring an practical transmission speed of said data on said wireless line in said every call;

determining said transmission capacity that is required for transmitting said data at said transmission speed through said wired line at the minimum level in said every call as a target transmission capacity;

decreasing a permissible transmission capacity in the case where a difference between said permissible transmission capacity usable for transmission of said data through said wired line, which is determined in said every call, and said target transmission capacity is smaller than a predetermined first threshold; and

increasing the permissible transmission capacity in the case where a difference between said permissible transmission capacity and said target transmission capacity is larger than a predetermined second threshold;

whereby a transmission speed of said data in said wired line being controlled so as to be equal to or less than said permissible transmission capacity.

3. A method for controlling a transmission capacity as claimed in claim 1 or 2, wherein:

said permissible transmission capacity is periodically updated.

1 4. A mobile communication system implementing a data
2 communication by transmitting data through a wireless line and
3 a wired line in accordance with a packet system, comprising:

4 a wherein an practical transmission speed of said data in
5 said wireless line is measured in every call, a transmission
6 capacity required for transmitting said data of the transmission
7 speed through said wired line at the minimum level is determined
8 as a target transmission capacity in said every call, a
9 transmission capacity demanding signal for decreasing a
10 permissible transmission capacity is transmitted in the case
11 where said permissible transmission capacity usable for
12 transmission of said data through said wired line and determined
13 in said every call is larger than said target transmission
14 capacity, and said transmission capacity demanding signal for
15 increasing a permissible transmission capacity is transmitted
16 in the case where the permissible transmission capacity is
17 smaller than said target transmission capacity;

18 a relay station wherein said transmission capacity
19 demanding signal is received from said radio base station to
20 change said permissible transmission capacity set up inside the
21 station in said every call to control the transmission speed of
22 said data in said wired line so as to be equal to or less than
23 said permissible capacity and at the same time, to transmit the
24 transmission capacity demanding signal; and

25 a mobile switching station wherein said transmission
26 capacity demanding signal is received from said relay station
27 to change, in said every call, said permissible transmission

28 capacity set up inside the station in said every call to control
29 the transmission speed of said data in said wired line so as to
30 be equal to or less than said permissible transmission capacity.

1 5. A mobile communication system implementing a data
2 communication by transmitting data through a wireless line and
3 a wired line in accordance with a packet system, comprising:

4 a wherein an practical transmission speed of said data in
5 said wireless line is measured in every call, a transmission
6 capacity required for transmitting said data of the transmission
7 speed through said wired line at the minimum level is determined
8 as a target transmission capacity in said every call, a
9 transmission capacity demanding signal for decreasing a
10 permissible transmission capacity is transmitted in the case
11 where a difference between said permissible transmission
12 capacity usable for transmission of said data through said wired
13 line, which is determined in said every call, and said target
14 transmission capacity is larger than a predetermined first
15 threshold, and said transmission capacity demanding signal for
16 increasing a permissible transmission capacity is transmitted
17 in the case where a difference between the permissible
18 transmission capacity and said target transmission capacity is
19 smaller than a predetermined second threshold;

20 a relay station wherein said transmission capacity
21 demanding signal is received from said radio base station to
22 change said permissible transmission capacity set up inside the
23 station in said every call to control the transmission speed of
24 said data in said wired line so as to be equal to or less than

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25 said permissible capacity and at the same time, to transmit the
26 transmission capacity demanding signal; and
27 a mobile switching station wherein said transmission
28 capacity demanding signal is received from said relay station
29 to change said permissible transmission capacity set up inside
30 the station in said every call to control the transmission speed
31 of said data in said wired line so as to be equal to or less than
32 said permissible transmission capacity.

1 6. A mobile communication system as claimed in claim 4 or
2 5, wherein:

3 said radio base station measures periodically said
4 transmission speed to determine said permissible transmission
5 capacity, and transmits said transmission capacity demanding
6 signal as occasion demands.